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What is claimed is:

1.   A moving picture indexing and searching method using a motion activity describing method, comprising the steps of:

describing a motion feature information in terms of a video name, a time stamp and an f-code which is a motion feature range; and

indexing and searching a moving picture using said motion feature information.

2.   The method of claim 1, wherein said video name has a plurality of time stamps and a f_code.

3.   A moving picture indexing and searching method using a motion activity describing method, comprising the steps of:

describing a motion feature information in terms of a video name and a time stamp, and a frequency of an Inter mode of No_MC, a frequency of an Intra mode of No_MC and a frequency of an MC mode obtained by a selected process; and

indexing and searching a moving picture using said motion feature information.

4.   The method of claim 3, wherein said video name has a plurality of time stamps, a frequency of an Inter mode of a No_MC, a frequency of an Intra mode of a No_MC, and a frequency of an MC mode.

5.   The method of claim 3, wherein said selected process

comprises:

a first step of determining whether an MB_Mode is a No_MC mode;

a second step of determining whether MB_Mode is No_MC_inter mode, if MB_Mode is determined as No_MC mode in said first step;

5 a third step of increasing counting value(no_mc_inter) of a counter for counting a frequency of No_MC_Inter mode and determining whether a current MB is a last MB, if MB_Mode is determined as No_MC_Inter mode in said second step, and determining whether MB_Mode is No_MC_Intra mode if MB_Mode is not determined as No_MC_Inter mode;

10 a fourth step of increasing counting value(no_mc_intra) of a counter for counting a frequency of No_MC_Intra mode and determining whether a current MB is a last MB, if MB_Mode is determined as No_MC_Intra mode in said third step, and increasing counting value(mc) of a counter for counting a frequency of MC mode and

15 determining whether a current MB is a last MB, if MB_Mode is not determined as No_MC mode in said third step; and

a fifth step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first to third steps if said current MB is not determined as a last MB in said fourth

20 step, and obtaining a frequency(No_MC_Inter_Ratio) of Inter mode of No_MC, frequency (Intra_Ratio) of Intra mode of No_MC, and frequency (Intra_Ratio) of Intra mode of No_MC, if said current MB is determined as a last MB in said fourth step.

25 [Equation]

No_MC_Inter_Ratio   =   no_mc_inter/TotMBs

Intra_Ratio = no_mc_intra/TotMBs

MC_Ratio = mc/TotMBs

5   6.   A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a motion feature information based on a video name, a time stamp and a frequency of an Inter mode of a No_MC obtained by a selected process; and

10   indexing and searching a moving picture using said motion feature information.

7.   The method of claim 6, wherein said video name has a plurality of time stamps and a frequency of an Inter mode of an No_MC.

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8.   The method of claim 6, wherein said selected process comprises:

a first step of increasing counting value(mc_nc_inter) of a counter for counting a frequency of No_MC_Inter mode and determining

20   whether a current MB is a last MB if said MB_Mode is No_MC mode and No_MC_Inter mode; and

a second step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first step if said current MB is not determined as a last MB in said first step, and

25   obtaining a frequency(No_MC_Inter_Ratio) of Inter mode of No_MC

according to the following Equation, if said current MB is the last MB.

[Equation]

No_MC_Inter_Ratio = no_mc_inter/TotMBs

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9.   A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a motion feature information based on a video name, a time stamp and a frequency of an Intra mode of a No_MC obtained by a selected process; and

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indexing and searching a moving picture using said motion feature information.

10.   The method of claim 9, wherein said video name has a plurality of name information and a frequency of Intra mode of a No_MC.

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11.   The method of claim 9, wherein said selected process comprises:

a first step of increasing counting value(mc_nc_intra) of a counter for counting a frequency of No_MC_Intra mode and determining whether a current MB is a last MB if said MB_Mode is No_MC mode and No_MC_Intra mode; and

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a second step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first step if said current MB is not determined as a last MB in said first step, and

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obtaining frequency(Intra_Ratio) of Intra mode of No_MC according to the following Equation, if said current MB is the last MB.

[Equation]

Intra_Ratio = no_mc_intra/TotMBs

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12. A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a motion feature information based on a video name, a time stamp and a frequency of an MC mode obtained by a selected

10 process; and

indexing and searching a moving picture using said motion feature information.

13. The method of claim 12, wherein said video name has a

15 frequency of a plurality of time stamps and a frequency of an MC mode.

14. The method of claim 12, wherein said selected process comprises:

a first step of increasing counting value(mc) of a counter for

20 counting a frequency of MC mode and determining whether a current MB is a last MB if said MB_Mode is not No_MC mode; and

a second step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first step if said current MB is not determined as a last MB in said first step, and

25 obtaining a frequency(MC_Ratio) with respect to MC mode according to

the following Equation, if said current MB is the last MB.

[Equation]

MC_Ratio = mc/TotMBs

5   15.   A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a feature information based on a video name and a time stamp and a frequency of an MC_Coded mode and a frequency of an MC_Not_coded mode obtained by a selected process; and

10   indexing and searching a moving picture using said feature information.

16.   The method of claim 15, wherein said video name has a plurality of time stamps, a frequency of an MC_coded mode and a

15   frequency of an MC_Not_Coded mode.

17.   The method of claim 15, wherein said selected process comprises:

a first step of determining whether MB_Mode is MC mode;

20   a second step of determining whether MB_Mode is MC_Coded mode, if said MB_Mode is determined as MC mode in said first step;

a third step of determining whether a current MB is a last MB by increasing counting value(mc_not_coded) of a counter for counting a frequency of MC_Not_Coded mode, if said MB_Mode is not determined as

25   MC_Coded   mode   in   said   second   step,   and   increasing   counting

value(mc_coded) of a counter for counting a frequency of MC_Coded mode and further increasing counting value(mc) of a counter for counting a frequency of MC mode;

a fourth step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first to third steps if said current MB is determined as not a last MB in said third step, and obtaining a frequency(MC_Coded_Ratio) of the MC_Coded mode and a frequency(MC_Not_Coded_ratio) of the Not_Coded mode according to the following Equation, if said current MB is the last MB.

[Equation]

MC_Coded_Ratio = mc_coded/mc

MC_Not_Coded_Ratio = mc_not_coded/mc

18. A moving picture indexing and searching method using a motion activity technique, comprising the steps of:

describing a feature information based on a video name, a time stamp and a frequency of an MC_Coded mode and a frequency of an MC_Not_Coded mode; and

measuring a similarity by comparing the frequency of MC_Coded mode of a moving picture of a smaller f_code with the frequency of MC_Coded mode of a larger f_code or with the frequency of MC_Not_Coded mode with respect to a moving picture having different f_codes, and indexing and searching a moving picture using said feature information.

19.   The method of claim 18,   wherein said video name has a plurality of time stamps, a frequency of MC_Coded mode and a frequency of MC_Not_Coded mode.

5   20. The method of claim 18, wherein said selected process comprises:

a first step of determining whether MB_Mode is MC mode;

a second step of determining whether said MB_Mode is MC_Coded mode, if said MB_Mode is determined as MC mode in said first step;

10   a third step of increasing counting value(mc_not_coded) of a counter for counting a frequency of MC_Not_Coded mode if said MB_Mode is not determined as MC_Coded mode in said second step, and increasing counting value(mc_coded) of a counter for counting a frequency of MC_Coded mode, increasing counting value(mc) of a counter for

15   counting MC mode, and determining whether a current MB is a last MB if said MB_Mode is determined as MC_Coded mode in said second step; and

a fourth step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first to third steps if said current MB is not determined as a last MB in said third

20   step, and obtaining a frequency(MC_Coded_Ratio) of MC_Coded mode and a frequency(MC_Not_Coded_Ratio) of Not_Coded mode according to the following Equation if said MB is determined as a last MB in said third step.

[Equation]

25   MC_Coded_Ratio = mc_coded/mc

MC_Not_Coded_Ratio   =   mc_not_coded/mc

21.   A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a motion feature information in terms of a video name, a time stamp and a frequency of Inter mode of No_MC obtained by a selected process, a frequency of Intra mode of said No_MC, a frequency of MC mode, a frequency of a Coded mode with respect to MC mode and a frequency of Not_Coded mode with respect to MC mode; and

indexing and searching a moving picture using said motion feature information.

22.   The method of claim 21, wherein said video name has a frequency of a plurality of time stamps, a frequency of Inter mode of No_MC, a frequency of Intra mode of No_MC, a frequency of MC mode, a frequency of Coded mode with respect to Inter mode, a frequency of MC mode, a frequency of Coded mode with respect to MC mode, and a frequency of Not_Coded mode with respect to MC mode.

23.   The method of claim 21, wherein said selected process comprises:

a first step of determining whether MB_Mode is No_MC mode;

a second step of determining whether said MB_Mode is No_MC_inter mode, if said MB_Mode is determined as No_MC mode in said first step;

a third step of increasing counting value(no_mc_inter) of a

counter for counting a frequency of No_MC_Inter mode if said MB_Mode is determined as No_MC_Inter mode in said second step, and determining whether MB_Mode is No_MC_Intra mode if said MB_Mode is not determined as No_MC_Inter mode in said second step;

5   a fourth step of increasing counting value(no_mc_intra) of a counter for counting a frequency of No_MC_Intra mode if said MB_Mode is determined as No_MC_Intra mode in said third step, and determining whether MB_Mode is MC mode if said MB_Mode is not determined as No_MC_Intra mode;

10   a fifth step of determining whether said MB_Mode is MC_Coded mode if said MB_Mode is determined as MC mode in said fourth step;

a sixth step of increasing counting value(mc_not_coded) of a counter for counting a frequency of MC_Not_Coded mode if said MB_Mode is not determined as MC_Coded mode in said fifth step, and increasing

15 counting value(mc_coded) of a counter for counting a frequency of MC_Coded mode, increasing counting value(mc) of a counter for counting a frequency of MC mode, and determining whether a current MB is a 1st MB if said MB_Mode is determined as MC_Coded mode in said fifth step; and

20   a seventh step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first to sixth steps if said current MB is not determined as a last MB in said sixth step, and obtaining a frequency(No_MC_Inter_Ratio) of Inter mode of No_MC, a frequency(Intra_Ratio) of Intra mode of No_MC, a frequency

25 (MC_Ratio) with respect to MC mode, a frequency(MC_Coded_Ratio) of

MC_Coded mode, and a frequency(MC_Not_Coded_Ratio) of Not_Coded mode according to the following Equation if said MB is determined as a last MB in said sixth step.

[Equation]

No_MC_Inter_Ratio = no_mc_inter/TotMBs

Intra_Ratio = no_mc_intra/totMBs

MC_Ratio = mc/TotMBs

MC_Coded_Ratio = mc_coded/mc

MC_Not_Coded_Ratio = mc_not_coded/mc

24. A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

classifying a motion vector of a macro block having a video name, time stamp, MC_Not_Coded mode, MC_Coded mode and No_MC_Inter mode in accordance with f_code, describing in terms of f_code frequency obtained by a selected process, measuring a similarity by comparing each f_code frequency, and indexing and searching a moving picture using said motion feature information.

25. The method of claim 24, wherein said selected step comprises:

a first step of determining whether the MB_Mode is an MC_Mode;

a second step of increasing a counting value(f_code_c[1]) of a counter of f_code 1 and determining whether a current MB is a last MB if the MB_Mode is determined as Inter mode of No_MC mode;

a third step of selecting the   largest X-axis motion vector

(mv_x) and the largest Y-axis motion vector(mv_y) as a largest motion

vector(max_mv), obtaining a maximum value k of f_code by the selected

max_mv/16, increasing the counting value (f_code_c[k]) of the

5   obtained f_counter, and determining whether a current MB is the last

MB if MB_Mode is determined as MC_Mode in said first step; and

a fourth step of increasing a number of macro block used in a

motion feature range, repeatedly performing said first to third steps,

and obtaining a frequency of f_code according to the following

10   Equation if a current MB is the last MB

[Equation]

f_code_ratio[k] = f_code_c[k]TotMBs

26. A moving picture indexing and searching method using a

15   motion activity describing technique, comprising the steps of:

classifying a motion vector of a macro block having a video name,

time stamp, MC_Not_Coded mode, MC_Coded mode and No_MC_Inter mode in

accordance with f_code, describing in terms of f_code frequency

obtained by a selected process, measuring a similarity by comparing

20   each f_code frequency with an at least one adjacent f_code frequency,

and indexing and searching a moving picture using said motion feature

information.

27. The method of claim 26, wherein said selected step comprises:

25   a first step of determining whether the MB_Mode is an MC_Mode;

a second step of increasing a counting value(f_code_c[1])

of a counter of f_code 1 and determining whether a current MB is a

last MB if the MB_Mode is determined as Inter mode of No_MC mode;

a third step of selecting the largest X-axis motion vector (mv_x)

5 and the largest Y-axis motion vector(mv_y) as a largest motion

vector(max_mv), obtaining a maximum value k of f_code by the selected

max_mv/16, increasing the counting value (f_code_c[k]) of the

obtained f_counter, and determining whether a current MB is the last

MB if MB_Mode is determined as MC_Mode in said first step; and

10 a fourth step of increasing a number of macro block used in a

motion feature range, repeatedly performing said first to third steps,

and obtaining a frequency of f_code according to the following

Equation if a current MB is not determined as a last MB in said second

and third steps.

15 [Equation]

f_code_ratio[k] = f_code_c[k]/TotMBs

28. A moving picture indexing and searching method using a

motion activity describing technique, comprising the steps of:

20 classifying a motion vector of a macro block having a video name,

time stamp, MC_Not_Coded mode, MC_Coded mode and No_MC_Inter mode in

accordance with f_code, describing in terms of f_code frequency

obtained by a selected process, measuring a similarity by comparing

each f_code frequency with an at least one adjacent f_code frequency,

25 said comparison is performed in such a manner that said similarity is

larger when said motion vector is closer to a maximum value and a

minimum value of a vector range described by each f_code and a

reproduced motion compensation error is larger, and a weighted value

is added to a frequency of f_code larger than the releant f_code, and

5   indexing and searching a moving picture using said f_code frequency.

29. The method of claim 28, wherein said selected step comprises:

a first step of determining whether the MB_Mode is an MC_Mode;

a second step of increasing a counting value (f_code_c[1]) of a

10   counter of f_code 1 and determining whether a current MB is a last MB

if the MB_Mode is determined as Inter mode of No_MC mode in said first

step;

a third step of selecting the largest X-axis motion vector (mv_x)

and the largest Y-axis motion vector (mv_y) as a largest motion

15   vector (max_mv), obtaining a maximum value k of f_code by the selected

max_mv/16, increasing the counting value (f_code_c[k]) of the

obtained f_counter, and determining whether a current MB is the last

MB if MB_Mode is determined as MC_Mode in said first step; and

a fourth step of increasing a number of macro blocks used in a

20   motion feature range and repeatedly performing said first to third

steps, and obtaining a frequency of f_code according to the following

Equation if the current MB is determined as a last MB in said second

and third steps.

[Equation]

25   f_code_ratio[k] = f_code_c[k]/TotMBs

30. A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a feature information in terms of a video name and a
5   time stamp and a frequency of Inter mode of No_MC and a frequency of Intra mode of No_MC obtained by a selected process; and indexing and searching a moving picture using said feature information.

31. The method of claim 30, wherein said selected process
10   comprises:

a first step of determining whether MC_Mode is No_MC mode;

a second step of determining whether said MB_Mode is No_MC_inter mode, if said MC_Mode is determined as No_MC mode in said first step;

a third step of increasing counting value(no_mc_inter) of a
15   counter for counting a frequency of No_MC_Inter mode if said MB_Mode is determined as No_MC_Inter mode and determining whether a current MB is a last MB in said second step, and determining whether MB_Mode is No_MC_Intra mode if said MB_Mode is not determined as No_MC_Inter mode in said second step;

20   a fourth step of increasing counting value(no_mc_intra) of a counter for counting a frequency of No_MC_Intra mode if said MB_Mode is determined as No_MC_Intra mode in said third step, and determining whether a current MB is a last MB if said MB_Mode is not determined as No_MC_Intra mode; and

25   a fifth step of increasing number of macro blocks (TotMBs) used

in a motion feature range and repeatedly performing said first to fourth steps if said current MB is not determined as a last MB in said third and fourth steps, and obtaining a frequency(No_MC_Inter_Ratio) of Inter mode of No_MC and a frequency(No_MC_Intra_Ratio) of Intra mode of No_MC according to the following Equation if said MB is determined as a last MB in said fourth step.

[Equation]

No_MC_Inter_Ratio = no_mc_inter/TotMBs

Intra_Ratio = no_mc_intra/TotMBs